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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,111	02/15/2002	C. Gordon Todderud	D0031 NP	1564

7590

02/24/2005

BRISTOL-MYERS SQUIBB COMPANY

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Princeton, NJ 08543

EXAMINER

ZARA, JANE J

ART UNIT

PAPER NUMBER

1635

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/077,111

Applicant(s)

TODDERUD ET AL.

Examiner

Jane Zara

Art Unit

1635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 5,6,9-14,18,19 and 21-39 is/are pending in the application.
- 4a) Of the above claim(s) 5,6,9-14,18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10-15-02 and 8-29-03</u> | 6) <input checked="" type="checkbox"/> Other: <u>Sequence alignments</u>                |

### **DETAILED ACTION**

This Office action is in response to the communication filed 6-9-04.

Claims 5, 6, 9-14, 18, 19 and 21-39 are pending in the instant application.

### ***Election/Restrictions***

Claims 5, 6, 9-14, 18, 19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected elections, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 6-9-04.

Applicant's election without traverse of Group I, claims 1-4, 7, 8, 15-17 and 20, now replaced by claims 21-39, and SEQ ID NO: 12 in the reply filed on 6-9-04 is acknowledged.

### ***Information Disclosure Statement***

Reference "AO" provided in the IDS filed 10-15-02 has not been considered because it was not in English and there is no translation from Chinese.

### ***Specification Objection and Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21-35, 37-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 21, line 6, and claim 37, line 8, the term "corresponding to" is vague and unclear. Appropriate clarification is requested.

This application does not comply with the rules for the deposit of biological material as set forth below in the Suggestion for Deposit of Biological Material. For ATCC deposits, please be sure to use the current address in Virginia, rather than the former address in Maryland.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to and claims 21-36 are rejected under 35 USC § 112, first paragraph as failing to provide an enabling disclosure for the claimed invention.

The application discloses ATCC Accession No. PTA-3161 (see claim 21, line 11) that is encompassed by the definitions for **biological material** set forth in 37 C.F.R. § 1.801. Because it is apparent that this biological material is essential for practicing the claimed invention, it must be obtainable by a reproducible method set forth in the specification or otherwise be known and readily available to the public as detailed in 37 C.F.R. §§ 1.801 through 1.809.

It is unclear whether this biological material is known and readily available to the public or that the written instructions are sufficient to reproducibly construct this

biological material from starting materials known and readily available to the public. Accordingly, availability of such biological material is deemed necessary to satisfy the enablement provisions of 35 U.S.C. § 112. If this biological material is not obtainable or available, the requirements of 35 U.S.C. § 112 may be satisfied by a deposit of the biological material. In order for a deposit to meet all criteria set forth in 37 C.F.R. §§ 1.801-1.809, applicants or assignee must provide assurance of compliance with provisions of 37 C.F.R. §§ 1.801-1.809, in the form of a declaration or applicant's representative must provide a statement. The content of such a declaration or statement is suggested by the enclosed attachment. Because such deposit will not have been made prior to the effective filing date of the instant application, applicant is required to submit a verified statement from a person in a position to corroborate the fact, which states that the biological material which has been deposited is the biological material specifically identified in the application as filed (37 C.F.R. § 1.804). Such a statement need not be verified if the person is an agent or attorney registered to practice before the Office. Applicant is also reminded that the specification must contain reference to the deposit, including deposit (accession) number, date of deposit, name and address of the depository, and the complete taxonomic description.

#### ***SUGGESTION FOR DEPOSIT OF BIOLOGICAL MATERIAL***

A declaration by applicant or assignee, or a statement by applicant's agent identifying a deposit of biological material and averring the following may be sufficient to overcome an objection or rejection based on a lack of availability of biological material. Such a declaration:

1. Identifies declarant.
2. States that a deposit of the material has been made in a depository affording permanence of the deposit and ready accessibility thereto by the public if a patent is granted. The depository is to be identified by name and address. (See 37 C.F.R. § 1.803).
3. States that the deposited material has been accorded a specific (recited) accession number.
4. States that all restrictions on the availability to the public of the material so deposited will be irrevocably removed upon the granting of the patent. (See 37 C.F.R. § 1.808(a)(2)).
5. States that the material has been deposited under conditions that assure that access to the material will be available during the pendency of the patent application to one determined by the Commissioner to be entitled thereto under 37 C.F.R. § 1.14 and 35 U.S.C. § 122. (See 37 C.F.R. § 1.808(a)(1)).
6. States that the deposited material will be maintained with all the care necessary to keep it viable and uncontaminated for a period of at least five years after the most recent request for the furnishing of a sample of the deposited microorganism, and in any case, for a period of at least thirty (30) years after the date of deposit or for the enforceable life of the patent, whichever period is longer. See 37 C.F.R. § 1.806).
7. That he/she declares further that all statements made therein of his/her own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the instant patent application or any patent issuing thereon.

Alternatively, it may be averred that deposited material has been accepted for deposit under the Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure (e.g., see 961 OG 21, 1977) and

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that all restrictions on the availability to the public of the material so deposited will be irrevocably removed upon the granting of a patent.

Additionally, the deposit must be referred to in the body of the specification and be identified by deposit (accession) number, date of deposit, name and address of the depository, and the complete taxonomic description.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21-39 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims are drawn to isolated polynucleotides and methods comprising a nucleotide sequence at least 82% identical to SEQ ID NO: 12, or encoding an amino acid sequence of a cell signaling polypeptide involved in cell signaling cascade and having at least 82% sequence identity with SEQ ID NO: 13, or encoding a polypeptide or fragment thereof sharing at least 68.2% sequence identity with SEQ IDN No; 12, or detecting a polynucleotide encoding a ubiquitin conjugating enzyme or fragment thereof. The specification and claims do not adequately describe the elements essential to the genera comprising these sequence variants, nor do they describe the genus comprising a cell signaling polypeptide

involved in a cell signaling cascade or ubiquitin conjugating enzyme or fragment thereof. The disclosure does not clarify the common attributes encompassed by these very broad genera. The scope of the claims includes numerous structural variants and the genera are highly variant because a significant number of structural differences between members of a given genus is permitted. Concise structural features that distinguish structures within the various genera are missing from the disclosure and the claims. One of skill in the art would reasonably conclude that the disclosure fails to provide a representative number of species to describe the various genera claimed. Thus, Applicant was not in possession of the claimed genera.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 21-27, 29-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Tang et al.

Tang et al (USPN 6,569,662) teach methods and compositions comprising polynucleotides comprising or consisting of a nucleotide sequence at least 82%



identical to SEQ ID NO: 12, or encoding an amino acid sequence of a cell signaling polypeptide involved in cell signaling cascade and having at least 82% sequence identity with SEQ ID NO: 13, or their complementary sequence, or encoding a polypeptide or fragment thereof sharing at least 68.2% sequence identity with SEQ IDN No; 12, and which compositions further comprise an appropriate host cell comprising an appropriate expression vector comprising the polynucleotides above, and which methods comprise producing a recombinant polypeptide comprising expressing these polynucleotides, and which methods also comprise detecting the hybridization complex of the polynucleotides (see SEQ ID NO: 768 of USPN 6,569,662 and accompanying sequence alignment data attached to the Office action; see also col. 9-11, 12-16, and 19-23).

Claims 21, 30 and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Birin et al.

Birin et al teach a polynucleotide comprising or consisting of a nucleotide sequence encoding a polypeptide of SEQ ID NO: 13 or fragment thereof sharing at least 68.2% sequence identity with SEQ IDN No: 12 (see Accession No. AC006501 of Birin et al and accompanying sequence alignment data, attached to Office action).

### ***Conclusion***

Certain papers related to this application may be submitted to Art Unit 1635 by facsimile transmission. The faxing of such papers must conform with the notices published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94

(December 28, 1993) (see 37 C.F.R. § 1.6(d)). The official fax telephone number for the Group is **703-872-9306**. NOTE: If Applicant *does* submit a paper by fax, the original signed copy should be retained by applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED so as to avoid the processing of duplicate papers in the Office.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jane Zara** whose telephone number is **(571) 272-0765**. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John LeGuyader, can be reached on (571) 272-0760. Any inquiry regarding this application should be directed to the patent analyst, Katrina Turner, whose telephone number is (571) 272-0564. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JZ  
2-20-05

83 TC 1600

GenCore version 5.1.6  
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OM protein - nucleic search, using frame\_plus\_p2n model

Run on: February 5, 2005, 11:43:17 ; Search time 230 Seconds

(without alignments)

2731.871 Million cell updates/sec

Title: US-10-077-111-13

Perfect score: 2047

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Fgapop 6.0, Fgapext 7.0  
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Searched: 1202784 seqs, 81818359 residues

Total number of hits satisfying chosen parameters: 2403568

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

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- 2: /cgn2\_6/ptodata/1/ina/5A.COMB.seq:\*
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- 6: /cgn2\_6/ptodata/1/ina/backfile1.seq:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1978	96.6	1844	4	US-09-620-312D-768
2	234.5	11.5	2359	1	US-08-188-582-4
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4	227	11.1	7028	4	US-09-949-016-4194
5	227	11.1	7028	4	US-09-949-016-4195
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7	227	11.1	7042	3	US-09-092-508-1
8	227	11.1	7042	3	US-09-435-115-1
9	227	11.1	7042	3	US-09-098-310-1
10	227	11.1	7042	3	US-09-690-364-21
11	227	11.1	7042	3	US-09-949-016-4195
12	227	11.1	7075	3	US-09-092-508-15
					US-09-435-115-15

13	226.5	11.1	2130	4	US-09-620-312D-145	Sequence 145, App
14	220.5	10.8	937	4	US-10-101-464A-251	Sequence 251, App
15	218	10.6	5152	3	US-09-690-364-10	Sequence 10, Appl
16	217.5	10.6	3747	3	US-09-690-364-17	Sequence 17, Appl
17	217.5	10.6	7157	4	US-09-949-016-4192	Sequence 4192, Ap
18	217.5	10.6	7157	4	US-09-949-016-4193	Sequence 4193, Ap
19	217.5	10.6	7171	4	US-09-949-016-971	Sequence 971, App
20	216	10.6	2152	1	US-08-188-582-17	Sequence 17, Appl
21	216	10.6	2152	1	US-08-646-715-17	Sequence 17, Appl
22	203.5	9.9	1246	3	US-09-302-769-22	Sequence 22, Appl
23	198.5	9.7	2186	3	US-09-184-001-1	Sequence 1, Appli
24	198.5	9.7	2558	3	US-09-184-001-2	Sequence 1, Appli
25	195	9.5	7886	2	US-08-751-189-2	Sequence 2, Appli
26	195	9.5	7886	2	US-09-060-836-2	Sequence 2, Appli
27	195	9.5	7886	2	US-09-184-445-2	Sequence 2, Appli
28	193.5	9.5	2369	3	US-09-302-769-20	Sequence 20, Appli
29	188	9.2	3465	3	US-08-914-999-5	Sequence 5, Appli
30	187.5	9.2	9991	4	US-09-902-540-1014	Sequence 1014, Ap
31	187	9.1	1422	4	US-09-248-796A-4567	Sequence 4567, Ap
32	184.5	9.0	1157	4	US-09-270-767-14727	Sequence 14727, A
33	184.5	9.0	1731	4	US-09-902-540-1920	Sequence 1920, Ap
34	183.5	9.0	1548	4	US-09-614-221A-136	Sequence 136, App
35	182	8.9	2481	4	US-08-899-578-1	Sequence 899, App
36	180.5	8.8	1698	4	US-09-902-540-8422	Sequence 8422, Ap
37	180.5	8.8	1698	4	US-09-902-540-885	Sequence 885, App
38	180	8.8	1182	4	US-09-248-796A-4568	Sequence 4568, Ap
39	178.5	8.7	1542	4	US-09-949-016-1365	Sequence 1365, Ap
40	176	8.6	1185	4	US-09-248-796A-4600	Sequence 4600, Ap
41	176	8.6	1185	4	US-09-108-857-1	Sequence 1, Appli
42	175.5	8.6	2272	3	US-08-190-802A-19	Sequence 19, Appli
43	175.5	8.6	1115	3	US-08-477-346-19	Sequence 19, Appli
44	175.5	8.6	1115	3	US-08-473-089-19	Sequence 19, Appli
45	175.5	8.6	1115	3	US-08-487-072A-19	Sequence 19, Appli

ALIGNMENTS

RESULT 1  
US-09-620-312D-768  
Sequence 768, Appl  
Patent No. 6569662  
GENERAL INFORMATION:  
APPLICANT: Tang, X. Tom  
APPLICANT: Liu, Chenghua  
APPLICANT: Asundi, Vinod  
APPLICANT: Zhang, Jie  
APPLICANT: Ren, Feiyan  
APPLICANT: Chen, Rui-hong  
APPLICANT: Zhao, Qing A.  
APPLICANT: Wehrman, Tom  
APPLICANT: Xue, Aidong J.  
APPLICANT: Yang, Yonghong  
APPLICANT: Wang, Jian-Rui  
APPLICANT: Zhou, Ping  
APPLICANT: Ma, Yunqing  
APPLICANT: Wang, Dunrui  
APPLICANT: Wang, Zhiwei  
APPLICANT: John Tillinghast  
APPLICANT: Dmanac, Radjoe T.  
TITLE OF INVENTION: No. 6569662el Nucleic Acids and  
FILE REFERENCE: 784CIP2B  
CURRENT APPLICATION NUMBER: US/09/620,312D  
PRIOR FILING DATE: 2000-07-19  
PRIOR APPLICATION NUMBER: 09/552,317  
PRIOR FILING DATE: 2000-04-25  
PRIOR APPLICATION NUMBER: 09/488,725  
NUMBER OF SEQ ID NOS: 1105  
SOFTWARE: pt\_fl\_genes Version 1.0  
SEQ ID NO 768  
LENGTH: 1844  
TYPE: DNA



REFERENCE  
1  
Yue H., Tang Y.T., Bandman O., Hillman J.L., Lal P., Au-Young J.,  
Reddy R., Yang J., Baughn M.R., Lu D.A., Azimzal Y. and  
Patterson C.  
TITLE  
GTP-binding protein associated factors  
JOURNAL  
Patent: WO 0105970-A 130 25-JAN-2001;  
Incyte Genomics, Inc. (US)  
FEATURES  
source  
Location/Qualifiers  
1. 1291  
/organism="Homo sapiens"  
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/note="Incyte ID No: 4546403CB1"

Alignment Scores:  
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Score: 1226.50 Matches: 246  
Percent Similarity: 71.97% Conservative: 3  
Best Local Similarity: 71.10% Mismatches: 4  
Query Match: 59.92% Indels: 93  
DB: 6 Gaps: 2

US-10-077-111-13 (1-384) x AK077675 (1-1291)

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QY 151 GlySerPhePheValThrGlySerSerCysglYAspLeuThrValTTPAspAspLysMet 170  
DB 58 GGAAGCTCTTCTGCTACTGCTGCACTTCATGCTGATTAACAGTGGGATGATCAATG 117  
QY 171 ArGcysLeuHisSerGlnLysAlaHisAspLeuGlyLeuThrCysCysAspPheSer 190  
DB 118 AGGTCTGCAATGAGAAAGCAATATCTGAAATTTACCTGCTGCAATTTTCTTCA 177  
QY 191 GlnProValSerAspGlyGlnGlnGlyLeuGlnPhePheArgLeuAlaSerCysGlyGln 210  
DB 178 CAGCAGCTTCTGATGAGAAAGCAATGCTTCAATTTTTCATGCGGCAATGCTGCTAG 237  
QY 211 AspCysGlnVallyslleThrIleValSerPheThrHisIleLeu 225  
DB 238 GATTGCCAAGTCATAATTTGATGTTCTTTTACCAATATCTTGAATTTGAAATTTAAA 297  
QY 225 ----- 225  
DB 298 TATATAAGTACACGAGTGGGCACTGCTCTCTGCTTGTGCTTTTCCATGAT 357  
QY 225 ----- 225  
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DB 478 CTATAACCTTTTACTGCTAGTGTCAATGACAAACAGTGAACATCTGGCAATTT 537  
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QY 239 AspTrpSerGlnGluValIleSerThrTrpLeuCysAlaGlnAspLeuVal 258  
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VERSION AC006501.5 GI:4309874  
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ORGANISM  
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.  
REFERENCE  
AUTHORS  
Birted B., Linton L., Nusbaum C. and Lander E.  
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JOURNAL  
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2 (bases 1 to 147021)  
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Castle A., Cerny J., Colangelo M., Collins S., Collymore A.,  
Cooke P., Dearlano K., Depayre B., Devon K., Dewar K.,  
Donelan L., Doyle M., Ferreira P., Fitzhugh W., Forrest C.,  
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Meldrum J., Molla M., Morris W., Morrow J., Mychaleckyj J.,  
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Stange-Thomann N., Stojanovic N., Stone C., Subramanian A.,  
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Teefaye S., Tornella-Willer I., Vassiliev H., Vo A., Wagner A.,  
Wheeler J., Wu X., Wyman D., Ye W.J. and Zody M.

TITLE  
JOURNAL  
COMMENT

Wheeler, J., "MUSK" Wyman, D., Ye, W.J. and Zody, M.  
Direct Submission  
Submitted (26-FEB-1999) Whitehead Institute/MIT Center for Genome  
Research, 330 Charles Street, Cambridge, MA 02141, USA  
On Mar 1, 1999, this sequence version replaced gi:4309777.  
All repeats were identified using RepeatMasker: Smit, A.F.A. &  
Green, P. (1996-1997)  
<http://ftp.genome.washington.edu/RM/RepeatMasker.html>.

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Best Local Similarity:	45.71%	Mismatches:	98
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## AUTHORS

1 (bases 1 to 245795)  
 Muzny,D.,Marle., Metzker,M.,Lee., Abramson,S., Adams,C., Alder,J.,  
 Allen,C., Allen,H., Albrechts,S., Amin,A., Angiano,D.,  
 Anyalobechi,V., Aoyagi,A., Ayodeji,M., Baca,E., Baden,H.,  
 Baldwin,D., Bandaranaike,D., Barber,M., Barnstead,M., Benahmed,F.,  
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 Chacko,J., Chavez,D., Chen,G., Chen,R., Chen,Y., Chen,Z., Chu,J.,  
 Cleveland,C., Cockrell,R., Cox,C., Coyle,M., Cree,A., D'Souza,L.,  
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 Delgado,O., Denison,S., Deramo,C., Ding,Y., Dinh,H., Divya,K.,  
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